

ABSTRACT OF THE DISCLOSURE

A self-adjusting optical add-drop multiplexer monitors the power in a drop signal and attenuates the power in an add signal to match the power in express WDM channels (signals). When used in a fiber network, and more particularly, in a metro network, the deleterious effects of optical amplification are reduced. Power attenuation is also used in an optical switching assembly particularly useful in two-fiber ring network. The optical switching assembly monitors drop channels from the two rings of the network and attenuates the add channel(s) accordingly. An optical switch operates to direct the drop signal from one of the two rings to a receiver in accordance with a control signal based on the monitored drop channels. The self-adjusting optical add-drop multiplexer also monitors the power in the drop signals and issues an alarm if the drop signal is of a power level above or below predetermined levels.